

He recommends after the operation that a truss be worn, and especially a truss with a pad made to control the whole site of the operation. An illustration is used to describe this.

For our part, we believe that the point to be seen to is not the shape of the truss but its fit. We should be a little unhappy if we thought it essential to always send to M. Collin for spray-producers and to M. Rainal for trusses.

The book concludes with detailed accounts of ten operations by the author, of which nine were successful and found to remain so for periods varying up to as long as five years in one case. "No accidents were observed in any of the cases."

Our notice, broken up as it were, into fragments, conveys no idea of the completeness and finish of this excellent book. The young surgeon ambitious to commence the practice of the operation described, will not find in any language a safer or more useful guide. This notice must have demonstrated that it contains much to interest surgeons whose experience equals or exceeds that of M. Lucas-Championnière. And, throughout, the book is remarkable for its calm and judicial tone. The thoroughness and antiseptic enthusiasm which pervades every page never tempts our author into the slightest wilful exaggeration. After the fashion of the best French works, everything stated is given with precision and in due order. The form and arrangement of the monograph fit it to serve as a model. C. B. KEETLEY.

L'AMPUTATION DU MEMBRE SUPERIEURE DANS LA CONTIGUITE DU TRONC. (L'AMPUTATION INTERSCAPULO-THORACIQUE). Par PAUL BERGER, Chirurgien l'Hôpital Tenon, Professor Agrégé à la Faculté de Médecine, Membre de la Société de Chirurgie. G. Masson: Paris, 1887.

INTERSCAPULO-THORACIC AMPUTATION OF THE UPPER EXTREMITY. By PAUL BERGER. Paris: 1887.

This work is based on the author's paper last year before the French Surgical Congress (v. ANNALS, 1887, April, pp. 346-8). The operation in question consists of total ablation of scapula and arm, resp. in some cases of whatever was left by previous amputation or accidental mutilation. This also ordinarily involves removal of the external or even greater part of the clavicle. It is not exactly either an amputation or a disarticulation, and has no counterpart on the lower extremity. Although repeatedly practised it does not seem to have any recognized position as an operation.

Since Cheselden's work in the last century it has been known that

recovery might occur after accidental loss of these parts, yet the operation is a modern one. Cuming in 1808 is credited with having first performed it—for an accident in war. The earliest cases of such ablation for removal of tumors were by Americans in the thirties.

Previous collections of cases have been utilized together with recent scattered and two new cases, one communicated to him by Ollier and the other from his own service at the Charité. These to the number of 51 are given with all available details. Then follow special chapters on the results, indications and execution. He divides the cases into three classes, (1) total primary amputation for pathological causes—22 cases; (2) consecutive amputation (*i. e.*, exsection of the scapula subsequent to disarticulation at the shoulder) for like causes—16 cases; (3) amputation for injury—13 cases.

The results, immediate and subsequent, are given for each class. The mortality in class I was five, death following the operation in from a few minutes to six days. In one of these, however, the operation also included removal of a mammary cancer and resection of the thorax wall this making a large opening into the pleural cavity. Hence he puts the deaths attributed alone to the operation in question at 4 in 21 (19.05%). Amongst the 16 cases in class II there were 3 deaths, thus giving the same numerical ratio as in class I. This is an exception to the general rule that a reamputation is less serious than primary amputation at the same joint. Under class III there were 4 deaths, almost a third. Here concomitant lesions necessarily lower the chances of recovery. Against the possible criticism that favorable cases might be oftener published than failures, he points out that the 4 cases in the Paris hospitals all recovered and from this argues that the mortality given above can probably be reduced.

The deaths under class I—besides the case already mentioned—were twice due to shock, one being that of a child *æt.* 2 years—once to hæmorrhage and once to sepsis. The 3 deaths in the second class were owing to exhaustion, shock and septic infection. Of the traumatic cases 2 died from their extensive injuries. This leaves a mortality from the operation itself of 2 (1 from sepsis and 1 from exhaustion) in 11 or a little less than one-fifth. This, on comparing with the previous classes, he believes the average mortality.

Amongst the accidents from the operation we should expect the frequent occurrence of hæmorrhage, in view of the numerous and large vessels especially in cases of hæmorrhage. Yet the loss of blood was rarely great. In only two cases did it contribute to a fatal result, though in 2 others it was considerable.

Entrance of air into veins occurred certainly in 4 cases. Death followed in one case though not directly therefrom. One of these 4 operations was for an accident. In 3 cases the air entered through an opening in the subclavian vein, in 1 through the axillary vein. By previous ligation of the subclavian vein and due regard to the possibility of this accident danger from this source can be guarded against.

The last of the immediate complications is operative shock. In accident cases it is impossible to estimate the share of the operation in this. Here it might be desirable to wait until the traumatic shock had subsided, whenever possible.

Many of the recorded later complications such as inflammation, suppuration, septicæmia, gangrene, etc., were due to preventable septic infection. In several cases fistula has persisted for months. He concludes that the operation is not very frequently attended by accidents, and more rarely followed by complications.

When the operation has been performed for malignant growths there has been a large proportion of relapses. Here again the division into primary and secondary operations is used. Of 22 pathological primary operations, 17 survived for a longer or shorter period. One was for osteomyelitis and gave a permanent recovery. There remain 16 for diverse tumors. In 9 relapses occurred in from one month to four years. In only 3 of the remaining 7 was the result known to have been lasting.

Secondary operations for morbid processes do not show better results as regards relapses. In 13 of 16 cases the operation was survived, one of these was for osteitis. Of the 12 for tumors, 5 were followed by relapse, and in several others the later course was unknown. In a couple of cases the cure seems to have finally been permanent.

The resulting deformity varies somewhat according as the clavicle is or is not resected. When removed, the remaining parts have but a limited mobility and consequently slight tendency to ulcerate. Where the collar bone is preserved entire the form is better but there is more tendency to mechanical injury at its outer point, hence its removal is to be preferred. In 2 cases—1 recovering—a portion of the acromion was left with the clavicle. In some cases an incurvation of the vertebral column on the side of the removed member has developed. Prosthetic apparatus tends to counteract this besides masking the mutilation and partially replacing the usefulness of the lost extremity. He figures a form of chest corset passing over the shoulders and strapped around the remaining arm, the whole bearing an artificial substitute for the parts lost.

pathological indications for the operation are osteomyelitis, white swelling of the shoulder joint, malignant tumors and in exceptional cases aneurysms inaccessible to other means of treatment. Of the 20 cases for tumors, in 9 the primary seat was in the scapula, in 6 at the upper end of the humerus, whilst in 5 it was not given. In large tumors of the scapula the operations to be considered are resection, total removal, and amputation of arm and shoulder. The latter shows slightly less relapses than total removal of the bone; resection has less mortality but more relapses. Resection with preservation of the arm should be preferred wherever practicable, but is counter-indicated where the axillary vessels or the joint and upper part of the arm are involved, at times where the tumor is of great size, where the skin is considerably involved or ulcerated or the axillary glands are already infiltrated. An exploratory incision is hardly advisable, as, if the major operation is to be done, the vessels should first be ligated. Counter-indications to the interscapulo-thoracic amputation are the same as in all malignant tumors—inability to remove all that is diseased. This operation for tumors of the humerus he justifies where simple amputation would be insufficient.

Of the 13 cases for traumatism, 2 were for shot wounds, 4 for maiming by machinery, 6 for tearing off of the limb and 1 uncertain. His method of operating has already been described in the *ANNALS*. Various modifications of other surgeons are also included.

A general bibliography of the subject is appended, besides additional references in the text as the literature bearing on this question is included under that of operations in general on the scapula. Scattered through the body of the work are several illustrations, and at the end are two lithographs of the applied surgical anatomy.

WM. BROWNING.

*MANUAL PRÁCTICO DE CIRURGIA ANTISEPTICA.* Par el Dr. CARDENAL, Director del Hospital de Utra. Sra, del Sagrado Corazon de Jesus, etc. Segunda Edición. Con grabados intercalados y láminas aparte cromolithografiadas. Barcelona: Espasa y Ca, 1887.

*PRACTICAL HANDBOOK OF ANTISEPTIC SURGERY.* By Dr. CARDENAL. Second edition. Illustrated.

*ANLEITUNG ZUR WUNDBEHANDLUNG.* Von Dr. MAXIMILIAN SCHAECHTER, Operateur der 1. Chir. Universitätsklinik zu Budapest. Wiesbaden. J. F. Bergmann, 1887.

*GUIDE TO THE TREATMENT OF WOUNDS.* By Dr. M. SCHAECHTER, Operator in the University Clinic of Budapest.